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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

TAN-2-1472.01.US

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on N/ASignature N/ATyped or printed name N/A

Application Number

09/774,545

Filed

01-31-2001

First Named Inventor

Leslie M. Brooks

Art Unit

2451

Examiner

Hassan A. Phillips

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐

applicant/inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)☒

attorney or agent of record.

Registration number 29,662☐

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____



Signature

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Typed or printed name

215-568-6400

Telephone number

February 3, 2008

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.☒*Total of 2 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:

Brooks et al.

Application No.: 09/774,545

Confirmation No.: 3228

Filed: January 31, 2001

For: ADAPTIVE COMPRESSION IN AN
EDGE ROUTER

Group: 2451

Examiner: Hassan A. Phillips

Our File: TAN-2-1472.01.US

Date: **February 3, 2009**

**ARGUMENTS ACCOMPANYING PRE-APPEAL BRIEF
REQUEST FOR REVIEW**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A Pre-Appeal Brief Review is hereby requested with respect to the final rejection of all independent as anticipated by U.S. Patent 5,838,927 to Gillon et.al ("Gillon").

Pending claims 1-7, 9-19, 21-24, 28 and 32 are directed to facilitating improved compression efficiency for digital communications, such as, for example, Internet communications. Typically, data to be transmitted over the Internet is broken up into a series of segments which are sent in "Protocol Data Units" (PDUs).

The PDUs may contain data in a variety of different formats such as text, JPEG, MPEG, etc. Data in some formats, such as text, is readily compressed; data in other formats, such as JPEG, is already compressed and/or cannot be further compressed effectively.

Compression algorithms such as Lempel-Ziv-Welch (LZW) are well known in the art and utilize a Compression dictionary. As illustrated in Figures 3, 4a and 4b of the application, it is inefficient to apply LZW compression to all data since the compression dictionary can get filled with poorly compressible data for which a decision is then made not to compress such data.

To more efficiently utilize the compression mechanism, it is advantageous only to attempt to compress PDUs that have data of a type that is compressible. Gillon teaches a general way to accomplish this. At column 5, lines, 39 et seq., Gillon teaches that a data packet 400 can be filtered according to data type. If the data packet 400 is determined to have a type of data that is compressible, it is then attached to a “stream” of data which is compressed for transmission; if not, it is not directed to the “compression stream.”

The teachings of Gillon are somewhat confusing since Gillon sometime refers to data packet 400 as a “data stream,” but from the context it is clear that item 400 in Gillon is a “data packet.”

Gillon does note that if the data packet 400 does not have a header that indicates what the data type is, the data packet may be further examined to determine if the data is compressible, and, if so, the data packet is then directed to the “compression stream.”

The pending claims are also directed to filtering data packets identified as PDUs and selectively compressing or not compressing the data dependent upon data type. However, the present claims further refine the PDU filtering. Claim 1, for example, recites:

... filtering protocol-specific header and control information of a protocol data unit (PDU) to determine compressibility of the contents of said protocol data unit **including determining if a given protocol data unit is associated with a previously filtered protocol data unit by tracking previously filtered protocol data units and information regarding the compression applied to previously filtered protocol data units;**

based on the result of said filtering, selecting the state of data link compression for said protocol data unit to optimize compression efficiency such that **if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression that was applied to the previously filtered protocol data unit is selected;**

Figures 9a and 9b, provide an example of a series of PDUs in an HTTP webstream that are to be processed using the method of claim 1. The example webstream 900 includes three substreams of different data types; stream 1 comprising PDUs 1,2 and 4; stream 2, comprising PDUs 3 and 5; stream 3 comprising PDU 6. However, the header of only the first PDU of each substream identifies the type of data, i.e

PDU 1 identifies substream 1 as text data; PDU 3 identifies substream 2 as JPEG; PDU 6 identifies substream 3 as MPEG.

In accordance with claim 1, part of the PDU filtering process is the tracking of association with previously filtered packets, such as the creation of Stream Association Table 905 of Figure 9b. Thus when PDU 2 is filtered, it is determined that PDU 2 is associated with PDU 1 by, for example, reference to Stream Association Table 905 as indicated in step 1240 of Figure 12. Since PDU 1 was text and compressible, PDU 2 is assumed to be text and compressible without any further examination of PDU 2. Similarly, when PDU 5 is filtered, it is determined that PDU 5 is associated with PDU 3. Since PDU 3 was incompressible JPEG, PDU 5 is assumed to be incompressible JPEG without any further examination of PDU 5.

Gillon does not teach filtering of data packets or PDUs that includes “determining if a given protocol data unit is associated with a previously filtered protocol data unit by tracking previously filtered protocol data units” as claimed. Gillon does teach the further examination of a data packet 400 where the header data does not identify the type of data. This is eliminated by the claimed tracking of associations with previously filtered PDUs as claimed.

The Examiner argues that using LZW compression that is also taught by Gillon satisfies the tracking requirement of claim 1. While it is true that LZW compression applies a compression dictionary that was built from previously

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compressed data packets, this has nothing to do with the filtering of packets to determine whether or not they should be processed by the LZP algorithm. Tracking as part of the filtering to determine if a PDU should be subject to compression is claimed. Gillon simply does not teach this and, accordingly, Gillon does not anticipate the independent claims.

In view of the foregoing remarks, Applicants respectfully request withdrawal of the rejections based on Gillon and issuance of a Notice of Allowance.

Respectfully submitted,

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